Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605221F: KC-X, Next Generation Aerial Refueling Aircraft

BA 5: Development & Demonstration (SDD)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	22.629	15.000	863.875	0.000	863.875	1,146.007	1,189.883	345.599	48.147	Continuing	Continuing
655271: KC-X RDT&E	22.629	15.000	863.875	0.000	863.875	1,146.007	1,189.883	345.599	48.147	Continuing	Continuing

Note

The Air Force is preparing for the new source selection competition as a result of the SECDEF's termination of the KC-X competition on 10 Sep 08. The program schedule and the budget request presented in these documents represent a notional KC-X program. Any required restructuring of the funding will occur after contract award to align the dollars with the Defense Acquisition Board (DAB) approved baseline.

The FY05 Appropriations Bill established a \$100M Tanker Replacement Transfer Fund (TRTF). \$10.2M was used by the Air Force in FY05. The FY08 Appropriations Bill reduced \$50M in RDT&E, and moved an additional \$150M of FY08 RDT&E into the TRTF -- \$239.8M remained in the TRTF as of 4Q FY08. The FY09 Appropriations Bill rescinded the entire balance of the TRTF. The FY10 Appropriations Bill reduced \$132.9M in RDT&E, moved \$291.715M of FY10 RDT&E into the TRTF, and left \$15.0M in RDT&E to support program office & source selection activities, and to initiate contract award. The FY11 PB restructures the KC-X budget to account for the fact-of-life delays for the recompetition and planned summer 2010 contract award.

In FY2009, PE 0605221F, KC-X Next Generation Aerial Refueling Aircraft, 5271, KC-X RDT&E, efforts were transferred from PE 0401221F, KC-X Replacement Tanker, 4927, KC-X Replacement Tanker, in order to move funds to Budget Activity (BA) 05 to correctly represent the phase of the KC-X Program.

A. Mission Description and Budget Item Justification

To recapitalize the aging KC-135 fleet of aerial refueling aircraft, the Air Force considered data from an Analysis of Alternatives (AoA), along with industry input that was provided in response to both a Request for Information and two draft Requests for Proposal. Based on this information, the Air Force concluded that a strategy of full and open competition to select a commercial derivative replacement tanker aircraft would result in a best value tanker contract. The resulting KC-X source selection culminated in a 29 Feb 08 contract award to Northrop Grumman to develop and produce a tanker based on the A330-200. On 13 Mar 08, the Air Force issued a stopwork order to that contract in response to a protest filed by Boeing. On 18 Jun 08, the GAO sustained portions of that protest. On 10 Sep 08, SECDEF announced termination of the KC-X competition. On 6 Apr 09, SECDEF decided to proceed with a new competition. The FY11 PB restructures the KC-X budget to account for the fact-of-life delays for the recompetition and planned summer 2010 contract award.

The Air Force needs to replace its aging KC-135 tankers, which have an average age of 49 years. Replacement of the legacy fleet will take place in three stages, known as the KC-X, the KC-Y, and the KC-Z. The initial KC-X increment will replace roughly a third of the current capability with the purchase of 179 aircraft. The KC-

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605221F: KC-X, Next Generation Aerial Refueling Aircraft

BA 5: Development & Demonstration (SDD)

X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and redeployment of U.S. joint, allied and coalition forces. The KC-X will have communication, navigation and surveillance equipment for world-wide operations; will have the capability to perform missions in chemical and biological environments; will have the capability to operate in low-to-medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities; and will have necessary battle space awareness to mitigate survivability threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. The program plans to procure four RDT&E aircraft for integration and demonstration of capability that will ultimately be operationally fielded after a successful operational test phase. In addition, both aircrew and maintenance Training System Requirements Analyses (TSRA) will be conducted to determine training requirements. Aircrew and Maintenance training systems will be developed and procured via a future trainer-specific source selection, using KC-X funding. A Business Case Analysis will also be conducted to determine if the engines for the production aircraft will be Government Furnished or Contractor Furnished. Initial training and sustainment efforts will be provided via Interim Contractor Support (ICS).

KC-X funding will also support various studies and analyses including the five-nation Future Technology and Aerial Refueling (FTAR) project, and KC-Y/KC-Z planning activities.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	23.000	439.615	0.000	0.000	0.000
Current President's Budget	22.629	15.000	863.875	0.000	863.875
Total Adjustments	-0.371	-424.615	863.875	0.000	863.875
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
Reprogrammings	0.000	0.000			
SBIR/STTR Transfer	0.000	0.000			
Other Adjustments	-0.371	-424.615	863.875	0.000	863.875

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Ford	ce	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
3600: Research, Development, Test & Evaluation, Air Force	PE 0605221F: KC-X, Next Generation Aerial Refueling Airc	raft
BA 5: Development & Demonstration (SDD)		

Change Summary Explanation

The Air Force is preparing for the new source selection competition as a result of the SECDEF's termination of the KC-X competition on 10 Sep 08. The program schedule and the budget request presented in these documents represent a notional KC-X program. Any required restructuring of the funding will occur after contract award to align the dollars with the Defense Acquisition Board (DAB) approved baseline.

The FY05 Appropriations Bill established a \$100M Tanker Replacement Transfer Fund (TRTF). \$10.2M was used by the Air Force in FY05. The FY08 Appropriations Bill reduced \$50M in RDT&E, and moved an additional \$150M of FY08 RDT&E into the TRTF -- \$239.8M remained in the TRTF as of 4Q FY08. The FY09 Appropriations Bill rescinded the entire balance of the TRTF. The FY10 Appropriations Bill reduced \$132.9M in RDT&E, moved \$291.715M of FY10 RDT&E into the TRTF, and left \$15.0M in RDT&E to support program office & source selection activities, and to initiate contract award. The FY11 PB restructures the KC-X budget to account for the fact-of-life delays for the recompetition and planned summer 2010 contract award.

In FY2009, PE 0605221F, KC-X Next Generation Aerial Refueling Aircraft, 5271, KC-X RDT&E, efforts were transferred from PE 0401221F, KC-X Replacement Tanker, 4927, KC-X Replacement Tanker, in order to move funds to Budget Activity (BA) 05 to correctly represent the phase of the KC-X Program.

DATE: February 2010

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APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 5: Development & Demonstration	& Evaluation	n, Air Force				TURE ext Generati	on Aerial	PROJECT 655271: <i>KC</i>	C-X RDT&E		
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
655271: KC-X RDT&E	22.629	15.000	863.875	0.000	863.875	1,146.007	1,189.883	345.599	48.147	Continuing	Continuing

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Note

Quantity of RDT&E Articles

The Air Force is preparing for the new source selection competition as a result of the SECDEF's termination of the KC-X competition on 10 Sep 08. The program schedule and the budget request presented in these documents represent a notional KC-X program. Any required restructuring of the funding will occur after contract award to align the dollars with the Defense Acquisition Board (DAB) approved baseline.

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The FY05 Appropriations Bill established a \$100M Tanker Replacement Transfer Fund (TRTF). \$10.2M was used by the Air Force in FY05. The FY08 Appropriations Bill reduced \$50M in RDT&E, and moved an additional \$150M of FY08 RDT&E into the TRTF -- \$239.8M remained in the TRTF as of 4Q FY08. The FY09 Appropriations Bill rescinded the entire balance of the TRTF. The FY10 Appropriations Bill reduced \$132.9M in RDT&E, moved \$291.715M of FY10 RDT&E into the TRTF, and left \$15.0M in RDT&E to support program office & source selection activities, and to initiate contract award. The FY11 PB restructures the KC-X budget to account for the fact-of-life delays for the recompetition and planned summer 2010 contract award.

In FY2009, PE 0605221F, KC-X Next Generation Aerial Refueling Aircraft, 5271, KC-X RDT&E, efforts were transferred from PE 0401221F, KC-X Replacement Tanker, 4927, KC-X Replacement Tanker, in order to move funds to Budget Activity (BA) 05 to correctly represent the phase of the KC-X Program.

A. Mission Description and Budget Item Justification

Exhibit R-2A RDT&E Project Justification: PB 2011 Air Force

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To recapitalize the aging KC-135 fleet of aerial refueling aircraft, the Air Force considered data from an Analysis of Alternatives (AoA), along with industry input that was provided in response to both a Request for Information and two draft Requests for Proposal. Based on this information, the Air Force concluded that a strategy of full and open competition to select a commercial derivative replacement tanker aircraft would result in a best value tanker contract. The resulting KC-X source selection culminated in a 29 Feb 08 contract award to Northrop Grumman to develop and produce a tanker based on the A330-200. On 13 Mar 08, the Air Force issued a stopwork order to that contract in response to a protest filed by Boeing. On 18 Jun 08, the GAO sustained portions of that protest. On 10 Sep 08, SECDEF announced termination of the KC-X competition. On 6 Apr 09, SECDEF decided to proceed with a new competition. The FY11 PB restructures the KC-X budget to account for the fact-of-life delays for the recompetition and planned summer 2010 contract award.

The Air Force needs to replace its aging KC-135 tankers, which have an average age of 49 years. Replacement of the legacy fleet will take place in three stages, known as the KC-X, the KC-Y, and the KC-Z. The initial KC-X increment will replace roughly a third of the current capability with the purchase of 179 aircraft. The KC-

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0605221F: KC-X, Next Generation Aerial	655271: KC	C-X RDT&E
BA 5: Development & Demonstration (SDD)	Refueling Aircraft		

X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and redeployment of U.S. joint, allied and coalition forces. The KC-X will have communication, navigation and surveillance equipment for world-wide operations; will have the capability to perform missions in chemical and biological environments; will have the capability to operate in low-to-medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities; and will have necessary battle space awareness to mitigate survivability threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. The program plans to procure four RDT&E aircraft for integration and demonstration of capability that will ultimately be operationally fielded after a successful operational test phase. In addition, both aircrew and maintenance Training System Requirements Analyses (TSRA) will be conducted to determine training requirements. Aircrew and Maintenance training systems will be developed and procured via a future trainer-specific source selection, using KC-X funding. A Business Case Analysis will also be conducted to determine if the engines for the production aircraft will be Government Furnished or Contractor Furnished. Initial training and sustainment efforts will be provided via Interim Contractor Support (ICS).

KC-X funding will also support various studies and analyses including the five-nation Future Technology and Aerial Refueling (FTAR) project, and KC-Y/KC-Z planning activities.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: To begin recapitalizing the aging KC-135 fleet	22.629	15.000	863.875	0.000	863.875
FY 2009 Accomplishments: In FY2009: Program office began contract termination activities with Northrop Grumman KC-45. Began documentation and preparation of new contract solicitation for KC-X per SECDEF 8 Jul 09 decision to proceed with new competition. Began Aircraft and Maintenance Training System Requirement Analyses to determine training requirements.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

ARCHITEM NOMENCLATURE
PE 0605221F: KC-X, Next Generation Aerial
Refueling Aircraft

PROJECT
655271: KC-X RDT&E

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY2010: Continuing documentation and preparation of new contract solicitation for KC-X contract award planned for summer of 2010. After contract award, program office will begin the Engineering and Manufacturing Design (EMD) phase which includes purchase of EMD aircraft for development, integration, and demonstration of capability. Continuing Aircrew and Maintenance Training System Requirement Analyses. Begin solicitation for KC-X aircrew training and maintenance systems. Begin planning for developmental testing and evaluation. Continuing program office mission support and studies & analyses. The Tanker Replacement Transfer Fund (TRTF) will be used as required in 2010 and beyond.					
FY 2011 Base Plans: In FY2011: Continues KC-X tanker EMD activities. Awards KC-X aircrew training and maintenance systems development contracts. Continues test and evaluation efforts. Continuing program office mission support and studies & analyses. FY 2011 OCO Plans: In FY2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	22.629	15.000	863.875	0.000	863.875

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• PE 0605221F: KC-X Aircraft	0.000	0.000	0.000	0.000	0.000	0.000	1,582.962	3,213.361	3,265.010	0.000	0.000
Procurement, BP10											
• PE 0605221F (1): KC-X MILCON	0.000	0.000	0.000	0.000	0.000	83.989	156.000	69.000	218.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0605221F: KC-X, Next Generation Aerial

655271: KC-X RDT&E

BA 5: Development & Demonstration (SDD)

Refueling Aircraft

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	000	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• PE 0605221F (2): KC-X O & M	0.873	0.473	2.721	0.000	2.721	13.984	16.341	16.655	17.012	0.000	0.000

D. Acquisition Strategy

The Air Force is preparing for a new source selection competition as a result of the SECDEF's termination of the KC-X competition on 10 Sep 08. Draft RFP released on 25 Sep 09. The program schedule and budget request presented in these documents represent a notional KC-X program. Any required restructuring of the funding will occur after contract award to align the dollars with the Defense Acquisition Board (DAB) approved baseline. The Tanker Replacement Transfer Fund (TRTF) will be used as required in 2010 and beyond.

The Air Force needs to replace its aging KC-135 tankers, which have an average age of 49 years. Replacement of the legacy fleet will take place in three stages, known as the KC-X, the KC-Y, and the KC-Z. The initial KC-X increment will replace roughly a third of the current capability with the purchase of 179 aircraft.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0605221F: KC-X, Next Generation Aerial

655271: KC-X RDT&E

BA 5: Development & Demonstration (SDD)

Refueling Aircraft

Product Development (\$ in Millions)

				FY 20	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-recurring, RDT&E tanker aircraft and support	TBD/FP	Aerospace Manufacturer TBD	0.000	2.000		810.412		0.000		810.412	Continuing	Continuing	0.000
		Subtotal	0.000	2.000		810.412		0.000		810.412			0.000

Remarks

Support (\$ in Millions)

Capport (4 iii iiiiiiioi	10,												
				FY 2	2010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies and Analysis	Various	Various Various	2.000	1.000		1.800		0.000		1.800	Continuing	Continuing	0.000
		Subtotal	2.000	1.000		1.800		0.000		1.800			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605221F: KC-X, Next Generation Aerial

Refueling Aircraft

PROJECT

655271: KC-X RDT&E

Test and Evaluation (\$ in Millions)

				FY 20	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Planning	Various	Various Various	0.138	0.161		15.500		0.000		15.500	Continuing	Continuing	0.000
		Subtotal	0.138	0.161		15.500		0.000		15.500			0.000

Remarks

Management Services (\$ in Millions)

			FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	KC-X Program Office Wright Patterson AFB, OH	20.491	11.319		21.013		0.000		21.013	Continuing	Continuing	0.000
Trainer Development	TBD/TBD	Trainer Manufacturer TBD	0.000	0.520		15.150		0.000		15.150	0.000	15.670	0.000
		Subtotal	20.491	11.839		36.163		0.000		36.163			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605221F: KC-X, Next Generation Aerial

Refueling Aircraft

PROJECT

655271: KC-X RDT&E

	Total Prior Years Cost	FY 2010		2011 Ise	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	22.629	15.000	863.875		0.000		863.875			0.000

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605221F: KC-X, Next Generation Aerial

Refueling Aircraft

PROJECT

655271: KC-X RDT&E



KC-X Notional Schedule



U.S. AIR PORGE

Dominant Air Power: Design For Tomorrow... Deliver Today

Activity	FY09	FY10	FY11			FY12			FY13		FY14							
John Wood 2	1234	1234	1 2	3 4	1.	2	3 4	1	2	3 4	<u>1</u> 1	2	3	4	1	2	3	4
Program	Draft RFP	DAB																
Milestones	re le ase	•																
EMD Contract							EM	D -	4/	Virce	aft							
& 4 Aircraft		Contract A	ward															
Test &		0		I	nteg	grat	ed T	est/	FA	A			ו					
Evaluation											1	OT	&E	() () ()	100			
Logistics	ATS TS	RA																
LOGISTICS		MITS TSR	A															

RFP - Request for Proposal

EMD – Engineering Manufacturing and Development IOT&E – Initial Operational Test & Evaluation

MTS – Maintenance Training System

DAB – Defense Acquisition Board FAA – Federal Aviation Agency ATS – Aircrew Training System

TSRA – Training Systems Requirement Analysis

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R-1 Line Item #85 Page 11 of 12

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0605221F: KC-X, Next Generation Aerial

Refueling Aircraft

PROJECT

655271: KC-X RDT&E

Schedule Details

	St	tart	End		
Event	Quarter	Year	Quarter	Year	
Product Development: Non recurring, RDT&E tanker aircraft and support	3	2010	4	2011	
Trainer Development:	2	2010	4	2011	
Test & Evaluation: Test & Planning	1	2009	4	2011	
Support: Studies and Analysis	1	2009	4	2011	
Management: Program Office Support	1	2009	4	2011	